

Health and Conservation in the Cardamoms in Cambodia

Lessons Learned from the CI-CARE Partnership



CONSERVATION INTERNATIONAL, CAMBODIA

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Since 2004, CI has received funding from the U.S. Agency for International Development's (USAID) Office of Population and Reproductive Health (OPRH) to implement the Healthy Families, Healthy Forests project in Cambodia. In the Cardamom (Mountains) Conservation Landscape (CCL) in southwestern Cambodia, CI partnered with CARE Cambodia, the Forestry Administration and other NGOs and government authorities to implement an integrated Population, Health and Environment (PHE) initiative combining family planning and reproductive health (FP/RH) service delivery, health and environmental education and biodiversity conservation activities in order to improve human and ecosystem health. CI joined forces with local stakeholders – community members, local authorities, health and development organizations – in the CCL to bring valuable and much-needed health services to people in these remote areas. At the same time, we helped to empower community members to practice sustainable natural resource management and conserve their surroundings. We worked with partners to improve access to health services and information, increase awareness of the links between health and environment, and provide alternative livelihoods that are compatible with biodiversity. These efforts represented CI's commitment to improving the wellbeing of the world's stewards of biodiversity, those individuals on the frontlines of conservation.



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Introduction

The purpose of this document is to derive lessons learned from four years of conservation and health care interventions by Conservation International (CI) in partnership with Cooperative for Assistance and Relief Everywhere (CARE) Cambodia in the Cardamom Mountains Region of southwestern Cambodia. The lessons learned are derived from a desk review of documents and reports produced by both organizations, supplemented by a range of interviews and observations with both beneficiaries and health providers, as well as representatives of local authorities and community members involved in conservation and health promotion activities in the project location.

The intent of the document is to focus primarily on CI-CARE linked activities, that is, elements of CI's Population-Health-Environment (PHE) interventions involving reproductive health/family planning activities; however, lessons learned from the activities of CI's other partners on health and conservation in the area will also be reported, to the extent that the information permits. It should be noted that CI's activities in the area cover a broad range of conservation activities, including combined community-ranger patrols to prevent poaching and the introduction of alternate livelihoods, but these do not form the focus of this study.

Why link health and conservation? Smaller and healthier families exert less pressure on natural resources in the long term. In the short term, it also reduces the vulnerability of families to ill health, and therefore poses less of an economic burden which prompts families to turn to illegal activities such as poaching and logging to pay for health care costs. Health care is among the greatest needs that communities, particularly isolated communities, face in rural areas, and is frequently cited as among the top three community priorities.

In response to this, CI with support from USAID has worked on strategies to reduce and mitigate the effects of these threats to the environment. Practically, this has entailed CI entering into a partnership with CARE-Cambodia to deliver family planning, reproductive and general health services in the Thmar Bang district of Koh Kong province in southwestern Cambodia.

Project Description

CARE's Maternal and Child Health (MCH) program has been implemented in Koh Kong province since 2001. The expansion of the MCH program into Thmar Bang district was initiated in October 2004, supported by a sub-grant from Conservation International's Population-Environment Project. Thmar Bang is one of 8 administrative districts in Koh Kong Province in the southwest of Cambodia. The District town is located approximately 65 Kilometers from the Koh Kong Provincial Town, and about 30 kilometers from national road number 48. The MCH project in Thmar Bang covers 12 villages in Tatai Leu, Chumnoab, Reussey Chrum, Prolay and Thmar Don Poeuv communes under Smach Meanchey Operational District. The target population for the project consists of approximately 2,386 people.

The project "Healthy People Healthy Forest with RH/FP Integration" in Thmar Bang District, Koh Kong continued under an extended contract agreement between CARE and CI from July 2007 to June 2008. The objective of the project is to enable target communities to adopt safe RH/FP practices and to improve access to quality RH/FP services, thereby mitigating population pressure on key biodiversity areas.

Project Interventions

Health Post (HP) and Health Service Delivery. Project health interventions have focused on the promotion of voluntary birth spacing, ante- and post- natal care, support of a health post and the provision of outreach services, and an emergency referral system for pregnant women and infant children. Additionally, provision of equipment to the Health Post (situated in Russei Chrum commune), strengthening of general management of the post, and continued capacity development of health workers have also constituted key interventions. Training has included one-on-one training and coaching in ante-natal care and safe delivery practices, obstetric referrals, post partum and newborn care, breastfeeding, immunization including management of vaccines, and treatment of common diseases, including malaria and tuberculosis (TB).

CARE has also provided support to a set of health volunteer initiatives. The first of these has been the training of traditional birth attendants. These attendants have been trained in the use of home birth kits, which have allowed local woman to have their children at home while reducing the possibilities of post-partum complications. Volunteer health workers have also been supported through the village health support group (VHSG) program. Through this program, volunteers receive training that allows them to administer elementary health care services, e.g., vitamin A and B supplements and injections.

Another important health intervention is the implementation of family planning, reproductive health and general health care *education* services to the local population. Over the four years of

project interventions, health workers have conducted regular integrated health/environmental education sessions during outreach events, focusing on birth spacing, ante-natal care, birth preparedness, breast feeding, immunization, vitamin A, tuberculosis, primary health care (prevention of diarrhea and dengue fever), and environmental conservation. The VHSGs play a key role in these educational outreach activities and have remained enthusiastic in this activity, providing health education to small and large groups of people using posters and video shows.

Youth Information Center. CI and CARE have also supported the development of a Youth Information Center (YIC) in Thmar Bang. This was established in the Russei Chrum commune in December 2006 and became operational in March 2007. The purpose of the Center has been to provide young people living in this remote area, access to health information. Beside the health documents displayed at the YIC, the links between health, family size and the environment have also been promoted. For example, CARE-Cambodia is working closely with CI to integrate the involvement of YIC staff in outreach sessions, as well negotiations with them to supply environmental outreach material for the Center. To date, two youth volunteers have been selected and trained as peer educators to manage the YIC. The primary responsibility of these individuals is the maintenance of the YIC, including the registration of participants and readers attending the Center, conducting play groups and group discussions on health and environment amongst attendees at the YIC, as well as helping CARE-Cambodia staff to conduct health and environmental education promotional activities. CARE-Cambodia has also supplied a karaoke set as a means for attracting young people to the YIC.

Concerted efforts have also been made to develop and implement a coordinated Information, Education and Communication (IEC) strategy within the project area. Elements of this strategy have included:

- Informing local communities of the links between themselves, their well-being and the condition of the environment in which they live.
- Providing information on wildlife and forestry regulations and laws.
- Publicizing the work of the program to other organizations, government authorities and donors.
- Communicating the importance of the CCPF and the work of the program to a global audience.

Gender Recognizing the important role that women play in the provision of food security and health care at the household level, Women's Associations were established in two communes in order to empower women through supporting livelihood activities such as home gardens and a pig bank in 2004. In addition, CI also ensured the inclusion of women participants in Commune Natural Resource Management Committees (CNRMCs).

Participatory Land Use Planning (PLUP)

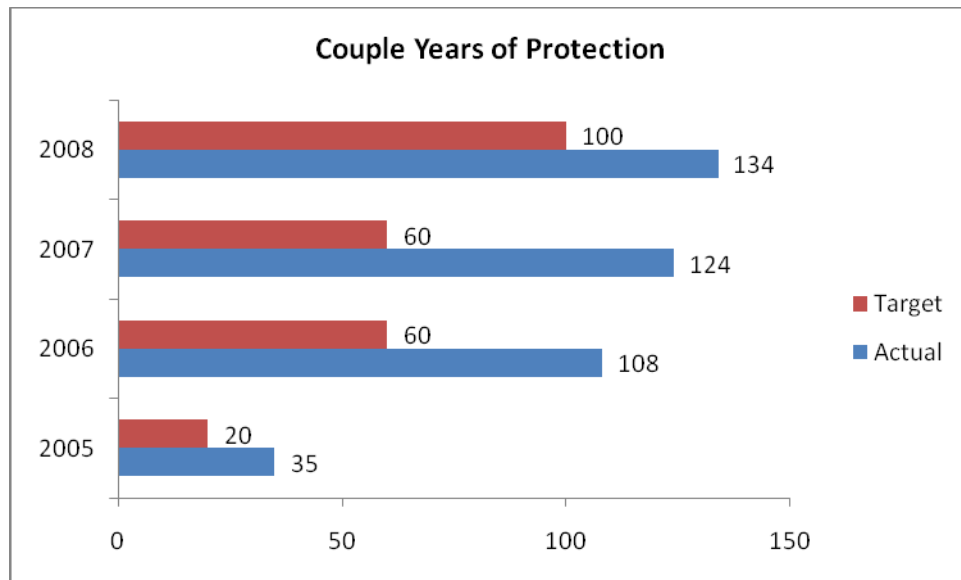
PLUP is a process that codifies people's rights and responsibilities within a landscape through a system of zonings (demarcated onto a land use map), and the promulgation of rules and regulations for the management of these designated areas. Together, these outputs allow conservation priorities to be recognized and incorporated into land use provisions that can be used to enhance biodiversity protection. In this role PLUP provides a vital foundation upon which all other conservation interventions can be based (e.g., conservation agreements). The continuation and completion of the PLUP process is therefore regarded as an essential part of the overall conservation process in the communes where it is underway. Rapid progress has been made in moving the PLUP process forward in the five communes of the Thmar Bang district where the program has been working on this activity since 2004.

A key aspect of the conservation agreements is the commune natural resource management committees (CNRMCs). These committees are democratically elected to represent communities in conservation activities, especially for implementation of incentive agreements that provide incentives in exchange for active participation in conservation efforts. By June 2008, all PLUP maps and associated rules and regulations were completed and awaiting the district governor's approval. Various benefits were provided to local communities as part of the conservation agreements. These benefits range from buffalo banks to assistance with ploughing and support for education in communes. Finally, an important part of the benefit package in every agreement has been support for the education system. Incentive payments have been provided to local teachers and financial assistance in the construction of a school in Chum Noab commune. Over the past year the project has also relied on the Association of Buddhists for the Environment (ABE) to promote key environmental messages within the communities resident in the project location. Although it is still too early to draw lessons from this partnership, community residents were questioned about its role and their perceptions of the value of utilizing monks for spreading conservation messages.

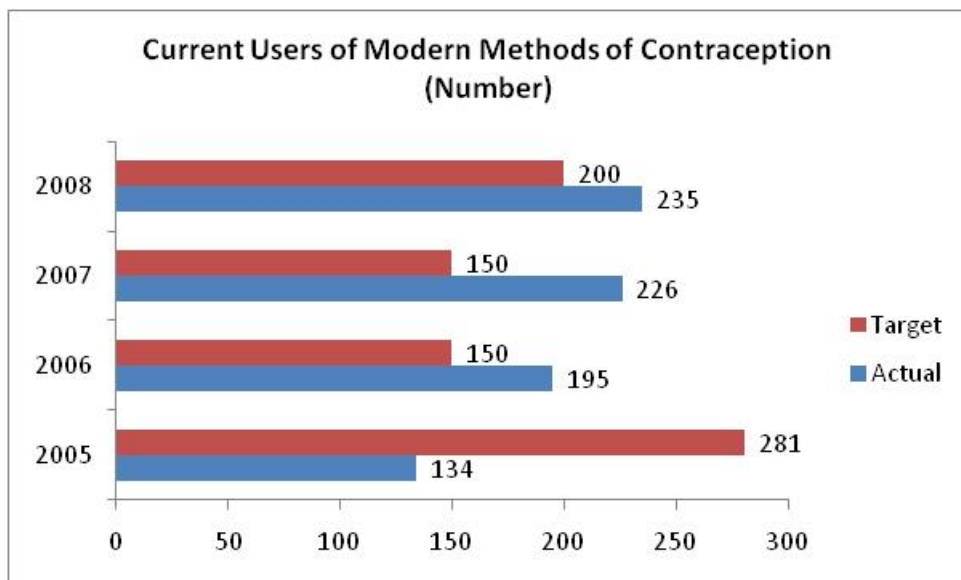
Key Performance Indicators

The following graphs present results for key reproductive health and family planning indicators in Thmar Bang district. As the graphs show, progress has been steadily improving over the 2005-08 period indicating the success of CI-CARE's partnership to provide quality health services to the communities in the district.

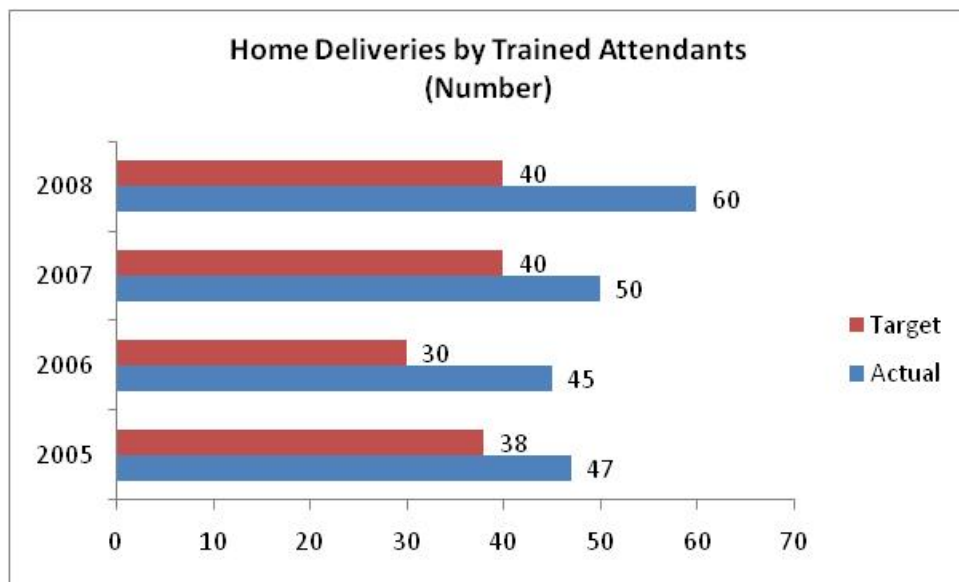
The project has increased couple years of protection from 35 in 2005 to 134 in 2008.



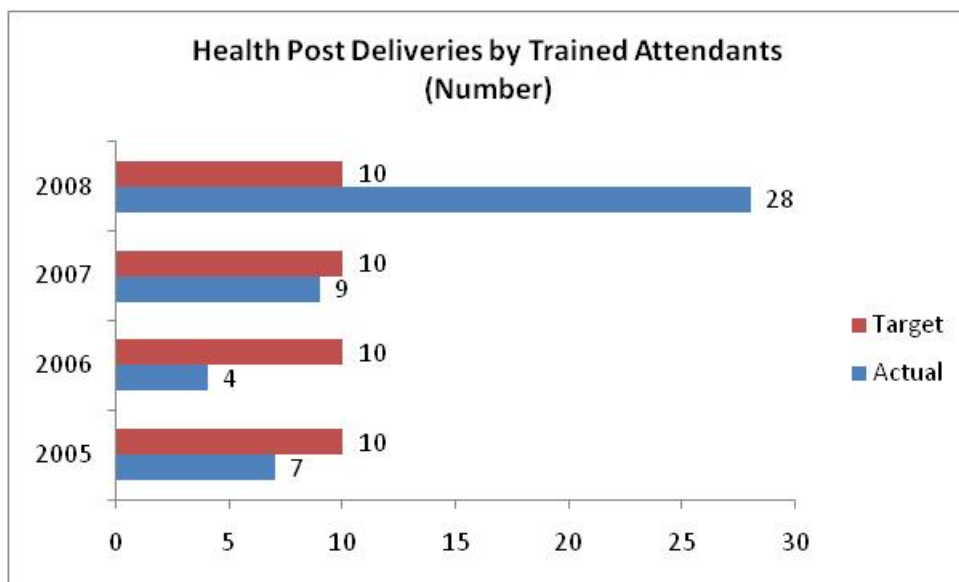
Similarly, as the graph below shows, the number of current users of modern contraceptives has steadily grown from 134 in 2005 to 235 in 2008.



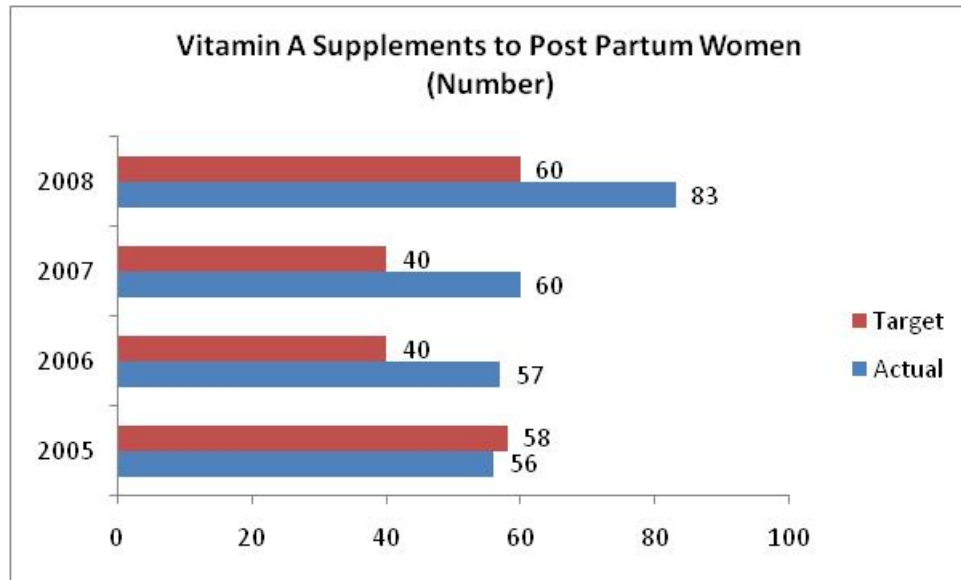
Home deliveries by trained TBAs have also shown an increase from 47 in the initial year of the project to 60 in 2008. In each year, actual achievements far surpassed the annual targets.



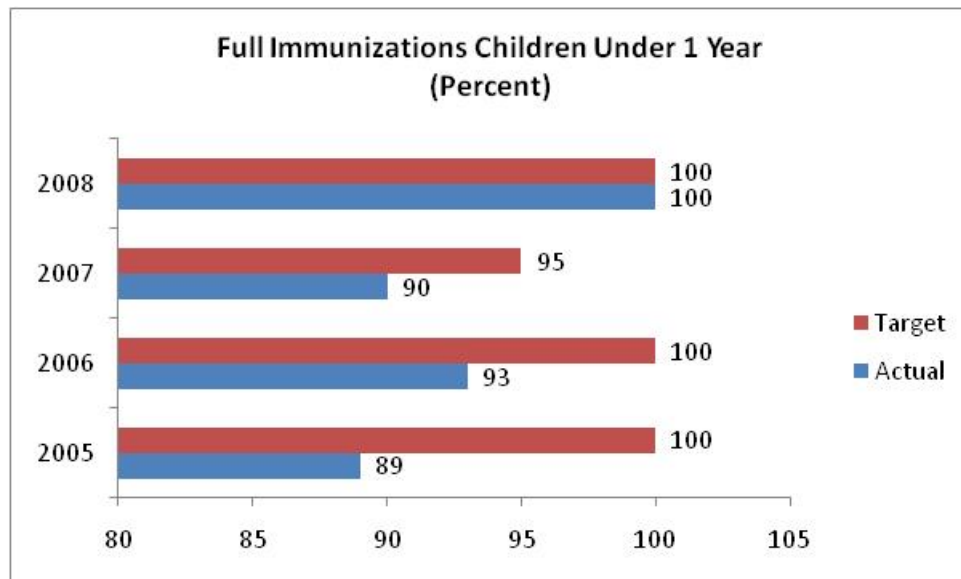
Health Post deliveries have fluctuated over the period, but have typically remained in the single digits, except for 2008 when there was a dramatic increase to 28 deliveries. The reason for the dramatic increase is that, with the departure of one of the younger midwives at the Health Post, the project recruited a popular trained TBA to serve at the health post, resulting in all of her clientele coming in for deliveries at the facility.



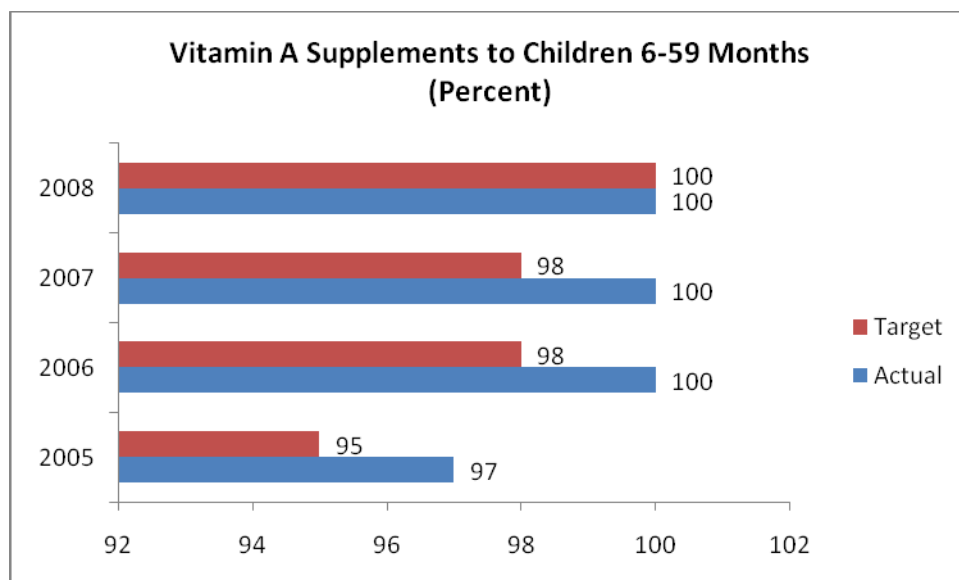
The number of mothers receiving vitamin A supplements post partum registered a significant increase over the period from 56 in 2005 to 83 in 2008. Other than the initial year of 2005, each year has seen an achievement well over the target set.



With respect to child health, fully immunized children under the age of one year have ranged from 89 percent in 2005 to 100 percent in 2008. In 2006 and 2007, although achievements were below targets set, they are in close proximity to them. The project uses nationally determined estimates of number of children under the age of one year by applying percents provided by the MOH, and discrepancies between these estimates and actual number of children under one year living in the project area may account for the difference.



Similarly, as the graph below shows, the proportion of children 6-59 months of age receiving vitamin A supplements rapidly achieved full coverage of 100 percent in 2006, and has remained at that level through 2008.



Stakeholder Perceptions

Interviews were conducted with a wide range of stakeholders in the project location. These included both service providers covering conservation and health workers, as well as project beneficiaries resident in the area.

The purpose of the interviews was to gauge one dimension of the impact of the project by determining stakeholders' perceptions of the project's objectives and benefits, and their levels of satisfaction with the services provided. Based on the responses, lessons learned were derived for the project.

Stakeholders were divided into two groups in the design of the questionnaires: service providers, and service recipients or beneficiaries. Service providers were divided into two sub-groups, health service support workers representing CARE, and conservation and livelihoods service providers, representing CI. Thus, there were 9 health service support workers, consisting of 4 Village Health Support Group (VHSG) members, 2 Traditional Birth Attendants (TBAs), 2 Community Based Distribution (CBD) agents, and the Health Post chief. There were also 9 conservation and livelihood service support "workers," consisting of 5 village and commune council chiefs, 3 Community Natural Resource Management Committee (CNRMC) members, and the deputy district governor.

There were 10 beneficiaries in total, all of them community members, including pregnant women, and mothers of children under the age of two. Six were interviewed using the same semi-structured questionnaires as the service providers. Four Health Post clients were

interviewed upon exiting the Health Post, using separate, structured questionnaires, which focused specifically on their levels of satisfaction with the services received.

Perceptions of Project Objectives

Service Providers' Perceptions of Project Objectives

Health Services Support Workers. Overall, all health service support workers interviewed knew of the Healthy Family, Healthy Forest project conducted by CI and CARE in their district and almost all, the VHSG members more than the rest, were able to clearly identify its objectives. These ranged from the generic, such as poverty reduction and improving people's livelihood, to project-specific, such as conservation of natural resources, and reduction of maternal and child mortality. Some attributed specific objectives to individual agencies, noting that CI was concerned with protecting the forest and wild animals, such as dragon fish, whereas CARE was concerned with health service provision and health education, such as birth spacing. For instance, a CBD agent stated that the purpose of the project was to "keep natural resources for the next generation", and a TBA said that "CI wanted progress in the village and commune (while) CARE wanted progress on health."

Conservation and Livelihood Service Support Workers. Similarly, all conservation and livelihood service support workers interviewed knew about the Healthy Family, Healthy Forest project conducted by CI and CARE in their district and were able to clearly articulate its objectives. According to them, the objectives included, through CARE, propagating birth spacing, breastfeeding, TBA training and ANC, reducing population growth, and reducing malaria and other diseases, and through CI, poverty reduction, keeping natural resources in the Kravanh mountain zone, building a school in Chum Neap village, organizing a ranger group, protecting rare wildlife like the tiger and elephant, and providing seeds, fertilizer and buffalos.

Beneficiaries' Perceptions of Project Objectives

On the other hand, although all six community members interviewed on the project said they knew about the Healthy Family, Healthy Forest project conducted by CI and CARE in their district, five did not know or could not recall its objectives, and only one said the objective of the project was to distribute buffalos to the community. The rest of the community members were not asked about the project.

Perceptions of Benefits

Service Providers' Perceptions of Project Benefits

Health Services Support Workers. The health service support workers were asked to comment on both aspects of the project, its health component and its conservation and livelihoods component. Not surprisingly, all of them were knowledgeable about the health component of the project. They were familiar with the variety of health services provided by the Health Post,

including treatment for TB and malaria, and obstetric care, as well as health education on topics such as birth spacing, antenatal care, immunizations, and tetanus toxoid injections for women of reproductive age. Similarly, they all expressed satisfaction with services at the Health Post. They measured the value the community placed on these services by the fact that “many women were using birth spacing” and that when “STI diseases received treatment, the cost of transportation was deducted at the HP.” While reduction of out-of-pocket expenses for patients who would have been otherwise forced to seek care at the provincial referral hospital or private clinic in the provincial town was identified as a major benefit, they also noted that poor patients benefited from the fee exemptions, and that people’s understanding of TB, malaria, the need for childhood immunization, ARI and diarrhea had significantly improved.

However, while all the health support workers were familiar with the conservation and livelihoods component of the PLUP project, most were much less knowledgeable about its objectives and processes, and less able to articulate clearly its benefits. Of all the participants within the health group, only the two CBD agents interviewed were able to identify the linkages between health and the environment clearly. For instance, one stated that “people have good health in a good environment” while the other clarified further that “losing the environment could cause people to face dry weather, and very hot, dry weather can cause the common cold or diarrhea.” They asserted that the primary participants of the PLUP process, CI representatives, commune and village chiefs, district governor, and community members, did consult with all the community members before making decisions regarding land use planning. One of them described the process in steps: “First, CI organizes a land study. Then the commune council and village chief spread the information to make an agreement with CI.”

Some of the health support workers were able to identify numerous benefits from the project. While most of these were immediate and obvious benefits, such as the provision of rice, fish cake and salt to TB patients through CARE and buffaloes and tractors to villagers through CI, a study tour for the community, per diems for the ranger group, monetary support for teachers, and transportation for families to bring patients to the Health Post, participants also identified long-term, less tangible benefits, such as increases in rainfall, availability of wood for housing, disease reduction, and family planning. Most agreed that the benefits could be sustained and become “a good model to the next generation”, if people “practiced the knowledge gained from health and conservation training” by “decreasing cutting wood, and reducing wildlife trade.”

Conservation and Livelihood Service Support Workers On the other hand, all the conservation and livelihood service support workers were very familiar with, and could confidently describe, the conservation and livelihoods component of the PLUP project and its process, but less so the details of its health services. While only some could clarify the linkages between health and environment, they were all able to identify the benefits of the project. For instance, one

participant defined PLUP as a process whereby “CI sets up a border to determine land to be conserved and the productive land of the community,” while another clarified the steps of the process as “one, forming a community; two, the community examining the land, then dividing (it into) conservation zone and productive land; three, mapping; and four, forming a community ranger group.” They thought the process was important because it enabled “the community to participate in protection activities” and by “making it easy to understand about land borders that can be used,” people would not cut wood or clear a forest to farm. They identified community members, CI, CNRMC, district and local authorities as primary participants in the PLUP process, who did consult with all the community members before making decisions regarding land use planning.

They articulated the linkages between health and the environment clearly, recognizing, in one instance, that people cutting wood would cause environmental damage, which would in turn affect people’s health through smoke pollution. Another participant noted that environment loss would lead to no rain or strong wind, which would affect people’s health because there would be nothing to eat. The perceived benefits from the project included improvement in people’s living and health status, access to health care that reduced travel time and costs, awareness of health education issues such as birth spacing and immunization, and land conservation issues such as the potential for making a profit through the use of natural products like resin and rattan. They agreed that the project had reduced treatment and transportation costs (“If we get treated at the HP, we spend 1,000 – 2,000 Riel. If we go to the province, we spend 200,000 – 300,000 Riel”), supported the provision of buffalos to plow the fields, disseminated health education with a focus on women and children, and made snare-setting and hunting a punishable offense.

They believed that the benefits were sustainable if CI and CARE continued its support until the community was able to conserve its natural resources on its own in the future, because people now understood the importance of conserving the forest and wildlife and health education and were strongly committed to these outcomes. The need for CI to continue its support toward sustainability was also stated by the deputy district governor. Another participant stated:

“If in the future, CI and CARE finish their project, the commune council will continue managing (it).”

Beneficiaries’ Perceptions of Project Benefits

It is significant that all the community members knew about and could describe the services provided by the Health Post, but were considerably less familiar with the conservation and livelihoods component of the project. Very few of those interviewed could describe or had participated in the PLUP process, and none of them could identify the linkages between population, health and environment in their community.

Almost all felt that community members valued the health services because people could receive treatment for malaria, fever, diarrhea, worms, as well as immunizations and delivery of babies. All four of the Health Post clients who were interviewed on exiting said they had visited the Health Post several times, and stated that the major reasons for choosing this facility were its proximity, and the good quality services provided by the staff.

The benefits they identified were related to the health rather than the conservation services. For instance, most of them noted that the project offered valuable benefits to the community by providing a Health Post and a school, ensuring good health in people, and providing TB treatment; one participant identified protection of forests and wildlife as a benefit. While some mothers felt that the benefits were sustainable because CI had forbidden wildlife trading, thus preserving the forests and wildlife, most had no opinion on this.

Satisfaction with Services

Service Providers' Satisfaction with Services

Health Services Support Workers Almost all the health services support workers expressed satisfaction with the Health Post services and the work of CI and CARE. They were particularly pleased with CI supplying buffalos to the community, and giving money to the ranger group and the school, and also appreciated the training the project had provided on protecting natural resources and conservation awareness. However, one participant was dissatisfied with the PLUP process because it had turned out that his land was in the conservation zone. They felt that the collaborative nature of the project helped the community to learn about both reproductive health, and forest conservation issues. Suggestions for improvement included employing highly trained staff, building better roads, and increasing community outreach services.

Conservation and Livelihood Service Support Workers All the conservation and livelihood service support workers expressed satisfaction with the work of CI and CARE, citing guidance on health problems, reduced health care costs, the \$30 a month support to the commune and cash and in kind support to the rangers from CI, immunization availability, and guidance on creating a clean household environment as reasons. Additionally, they appreciated the effort both agencies had made to establish good relationships and to help people in the commune. One participant believed that the community members valued these services because it meant that people had “no need to go away to Koh Kong town” and that “all community members, rich and poor, could receive services.” Another participant stated that the PLUP process ensured that “natural resources would remain for the next generation” and all felt that the discussions helped to make the determination of boundaries for reserved land and nomad farming easier.

Similarly, they all felt that the project had succeeded in creating local capacity to sustain conservation efforts by establishing a ranger group and improving community members’

understanding about land and wildlife conservation. For instance, the deputy district governor felt that the project had succeeded in building local capacity as the PLUP team consisted of “70% community and 30% CI.” Suggestions for improvement included more support from the government and CI for more health, a Health Post in their own communes, a road from the village to the HP for easy access, and more frequent outreach services.

Beneficiaries’ Satisfaction with Services

On the whole, the six mothers who were interviewed on their perspectives on both health and conservation expressed satisfaction with the services they received at the Health Post, and with the work of CI and CARE. Almost all of the Health Post clients that were interviewed on exiting gave the highest rating on level of satisfaction (“very satisfied”) with the services offered by the HP. The client who gave the next highest rating (“satisfactory”) suggested that more staff be added because “sometimes when (she) came here, staff were not present.” All said they would return to this HP if they needed health services. Some suggested that the HP could stock more items of medicine, and one mother requested that one be located in her commune.

Satisfaction with Using Monks

Respondents who had taken part in environmental education activities conducted by monks felt that there was value in using monks for this purpose, because, within the Khmer tradition, people have great respect for monks, and are, therefore, more open to listening to such messages from them. In these activities, the monks were effective because they used Buddhist theory to preach on the value of environmental conservation, and some ordained a tree ceremony to underscore the importance of saving trees by not cutting wood.

Lessons Learned and Conclusion

A number of key lessons learned may be gleaned from the four years of CI-CARE’s partnership in the Cardamom Mountains region. First and foremost, provision of quality health care services can serve as an important springboard for conservation activities. Particularly in areas such as Thmar Bang where such services previously were nonexistent, beneficiaries are quick to appreciate the tangible benefits that derive from the location of the health post in the area, and the outreach and support services provided to them and their families. Indeed, results from the interviews showed that project beneficiaries were more likely to possess more complete knowledge of health care benefits which are immediate in nature, than the more long term benefits arising from natural resource conservation and management interventions.

Second, the key to success of joint conservation and health care initiatives derives from the collaborative nature of project interventions and the good relationships established among stakeholders in the area. This was particularly evident from the responses of both conservation and health care workers who believed that the key to success of project interventions lay in the

efforts made by both organizations to establish such relationships, and that these efforts had also resulted in greater knowledge within the communities of the benefits of both conservation and quality health care services.

Third, the spectacular increase in health post deliveries over the past year because of the appointment of a popular TBA to the health post suggests that involving health care providers who already enjoy the trust of the communities is a key pathway to increasing the coverage of health services.

Fourth, while the small number of interviews conducted among beneficiaries is not sufficient to draw generalizable conclusions across the project area, the fact that so few of them could actively cite either project objectives or the benefits of conservation interventions suggests the need for a greater emphasis on improving community knowledge of the linkages between population, health and the environment. Since health services are now well established in the area and conservation measures have also rapidly expanded, it may be necessary to focus on improving community knowledge as a means of enhancing the sustainability of project benefits.

Fifth, the use of the Buddhist Sangha in the area to propagate conservation messages appears to be highly valued by project beneficiaries, deriving from the community's great respect for the monks, and this initiative although relatively new, needs to be expanded in future years.

Finally, the very success of the joint partnership between CI-CARE and the communities in the area so far suggests that these activities need to be continued if project benefits are to be sustained. This was highlighted by the deputy district governor who cited the need for CI to continue to support the communities in their conservation efforts. Having established the provision of quality health services and a wide range of conservation interventions, it is therefore necessary to continue to build on these efforts so as to enable the communities to continue to sustain project benefits in the future.

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